GenCore version 5.1.5

OM nucleic - nucleic search, using sw model

Run on: June 1, 2003, 14:56:34 ; Search time 466.436 Seconds
(without alignments)
10776.324 Million cell updates/sec

Title: US-09-625-573-1
Perfect score: 2232
Sequence: 1 GGATTGAACAAGGACGCATT.....TATAACTATGTTGATAAAAG 2232

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2185239 seqs, 1125999159 residues

Total number of hits satisfying chosen parameters: 4370478

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_101002:*
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24: /SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	2232	100.0	2232	16	AAQ96297	Human monocyte che
	2	1250.8	56.0	143068	21	AAF21105	Human low adenosin
	3	1250.8	56.0	143068	21	AAF21272	Human low adenosin
	4	1250.8	56.0	143068	21	AAA34983	Human adenosine re
	5	1250.8	56.0	143068	21	AAA35150	Human adenosine re
	6	1250.8	56.0	143068	24	ABL68124	Ovary cancer relat
	7	1250.8	56.0	149412	21	AAA35151	Human adenosine re
	8	1250.8	56.0	152740	21	AAF21273	Human low adenosin
	9	980	43.9	1979	16	AAQ96298	Human monocyte che
	10	941	42.2	1083	22	AAS12140	Human wild-type CC
	11	939.4	42.1	1083	22	AAS12139	Human CCR2-64I pol
	12	937.8	42.0	1083	18	AAT96976	Human monocyte che
	13	937.8	42.0	1083	23	ABI97976	Non-endogenous hum
c	14	668.2	29.9	10528	24	ABL32335	Human immune syste
	15	639.8	28.7	10528	24	ABL32334	Human immune syste
	16	635.6	28.5	1059	18	AAT85163	Macaque chemokine
	17	635.6	28.5	1059	22	AAI65463	Nucleotide sequenc
	18	632.6	28.3	1056	22	AAD13198	Human G-protein ch
	19	632.6	28.3	1056	22	AAD13299	Human G-protein ch
	20	632.6	28.3	1056	24	ABK51870	DNA encoding human
	21	632.6	28.3	1059	19	AAV23992	Human CC-CKR5 codi
	22	632.6	28.3	1059	24	ABA97319	Human chemokine (C
	23	632.6	28.3	1071	20	AAV84125	HIV-1 co-receptor
	24	632.6	28.3	1225	19	AAT76920	DNA encoding human
	25	632.6	28.3	1225	24	ABA02317	Human CC chemokine
	26	632.6	28.3	1376	22	AAH26903	Human HIV-1 co-rec
	27	632.6	28.3	1414	22	AAF26390	Human HDGNR10 cDNA
	28	632.6	28.3	1477	18	AAT90117	cDNA for human CCR
	29	632.6	28.3	1477	22	AAF87099	Human CCR5 cDNA se
	30	632.6	28.3	3383	18	AAT85161	Human chemokine re
	31	632.6	28.3	3383	21	AAF21271	Human low adenosin
	32	632.6	28.3	3383	21	AAA35149	Human adenosine re
	33	632.6	28.3	3383	22	AAD08577	Human chemokine re
	34	632.6	28.3	5674	20	AAZ24738	Human chemokine re
	35	632.6	28.3	9141	24	ABA97318	Human chemokine (C
	36	631.2	28.3	1376	20	AAV84126	HIV-1 co-receptor
	37	631	28.3	1225	24	ABA02318	Human CCR5 Gln 55
	38	629.4	28.2	1059	23	ABI97978	Non-endogenous hum
	39	629.4	28.2	1414	18	AAT44042	Human G-protein ch
	40	629.4	28.2	1414	21	AAZ91481	Human G-protein ch
	41	629.4	28.2	1414	22	AAD13181	Human G-protein ch
	42	629.4	28.2	1414	22	AAD13282	Human G-protein ch
	43	629.4	28.2	1414	24	ABK51853	DNA encoding human
	44	621.4	27.8	1255	19	AAT76919	DNA encoding human
	45	612.6	27.4	1344	20	AAV84159	HIV-1 co-receptor

ALIGNMENTS

RESULT 1
AAQ96297
ID AAQ96297 standard; cDNA; 2232 BP.
XX
AC AAQ96297;
XX
DT 29-DEC-1995 (first entry)
XX
DE Human monocyte chemoattractant protein-1 receptor MCP-1RA.
XX
KW Monocyte chemoattractant protein-1 receptor; MCR-1R; chemokine; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 40..1161
FT /*tag= a
XX
PN WO9519436-A.
XX
PD 20-JUL-1995.
XX
PF 11-JAN-1995; 95WO-US00476.
XX
PR 13-JAN-1994; 94US-0182962.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Charo I, Coughlin S;
XX
DR WPI; 1995-263866/34.
DR P-PSDB; AAR79165.

XX
PT DNA encoding monocyte chemo-attractant protein-1 receptor - used partic.
PT for identifying antagonists and for treating diseases characterised by
PT monocytic infiltrates
XX
PS Disclosure; Fig 1; 84pp; English.
XX
CC To identify and clone new members of the chemokine receptor gene
CC family, degenerate oligo primers were designed corresp. to the
CC conserved sequences R79167 in the second and R79168 in the third
CC transmembrane domains of the MIP-1alpha/RANTES receptor, the IL-8
CC receptors and the HUMSTRS orphan receptor (GenBank Accession #M99293.
CC The degenerate oligo incorporating EcoRI and XhoI sites at their 5'
CC ends are Q96299 and Q96300. Amplification of cDNA derived from MM6
CC cells with the primers yieled a number of PCR products. One cDNA
CC appeared to encode a novel protein. To obtain a full-length version
CC of this clone, a MM6 cDNA library was constructed in pFROG and probed
CC with the PCR product. A 2.1 kb cDNA clone was obtd. Analysis of
CC additional clones in the MM6 cDNA library revealed a second
CC sequence that was identical to the 2.1 kb cDNA sequence first obtd.
CC from the 5' UTR through the putative seventh transmembrane domain
CC but contained a different cytoplasmic tail. The second sequence
CC appears to represent alternative splicing of the carboxyl-terminal
CC tail of the MCP-1R protein. The two sequences are denoted MCP-1RA
CC and MCP-1RB (see Q96297/R79165 & Q96298/R79166). Active mature
CC MCP-1RA has a predicted mol. wt. of about 42,000 daltons. MCP-1RB
CC has a mol. wt. of about 41,000 daltons.
XX
SQ Sequence 2232 BP; 602 A; 464 C; 508 G; 658 T; 0 other;

Query Match 100.0%; Score 2232; DB 16; Length 2232;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 2232; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy       1 GGATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCT 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 GGATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCT 60

Qy      61 CGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGAT 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 CGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGAT 120

Qy     121 TACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCG 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 TACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCG 180

Qy     181 CTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTA 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 CTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTA 240

Qy     241 ATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 ATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCT 300

Qy     301 GATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTC 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 GATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTC 360

Qy     361 TTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGA 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 TTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGA 420

Qy     421 ATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTT 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 ATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTT 480

Qy     481 GCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTG 540

Qy     541 GCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 GCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTT 600

Qy     601 TATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAAC 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 TATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAAC 660

Qy     661 ATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAA 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 ATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAA 720

Qy     721 ACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACC 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 ACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACC 780

Qy     781 ATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 ATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACC 840

Qy     841 TTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACG 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 TTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACG 900

Qy     901 CAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTC 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 CAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTC 960

Qy     961 GTTGGGGAGAAGTTCAGAAGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTC 1020
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 GTTGGGGAGAAGTTCAGAAGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTC 1020

Qy    1021 CAAAAACCAGTGTGTGGAGGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACA 1080
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1021 CAAAAACCAGTGTGTGGAGGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACA 1080

Qy    1081 CAAGGACTCCTCGATGGTCGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGT 1140
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Db    1081 CAAGGACTCCTCGATGGTCGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGT 1140

Qy    1141 CTTCAGGACAAAGAAGGAGCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACA 1200
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1141 CTTCAGGACAAAGAAGGAGCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACA 1200

Qy    1201 CGTCTGGCTTCACAGATGTGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCA 1260
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Db    1201 CGTCTGGCTTCACAGATGTGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCA 1260

Qy    1261 GGAAGGCTGAGAGGAGAGAGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCT 1320
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Qy    1321 TCCAGTTCCTCATTTTTGAATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAAT 1380
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1321 TCCAGTTCCTCATTTTTGAATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAAT 1380

Qy    1381 AAAATTAAAGCTGAAAACTGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTAT 1440
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Qy    1441 CATGTCAAACGTGAAAATGCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGA 1500
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Db    1441 CATGTCAAACGTGAAAATGCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGA 1500

Qy    1501 ATTTTGAGCAGGTGGTATGTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGC 1560
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    1561 AGGAGTTGGAAGTGTGTGATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTA 1620
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Qy    1621 ATGATGTCGTTTGAATCACAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATT 1680
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Db    1621 ATGATGTCGTTTGAATCACAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATT 1680
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Qy   1681 CTCTCAGGCTTGCTGCCAAAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGC 1740
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Qy   1741 GTTTAATCACATTCGAGTGTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCC 1800
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Qy   1801 CTAATTTGCCAGTGGGAACTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCT 1860
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Qy   1861 ATTGGTAAAGAATGGAAGGTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGT 1920
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Qy   1921 CGAGCCAAGTTAAGAATGTTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAG 1980
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1921 CGAGCCAAGTTAAGAATGTTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAG 1980

Qy   1981 AAACACTGGGCTTCTAGAACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGC 2040
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1981 AAACACTGGGCTTCTAGAACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGC 2040

Qy   2041 TCTACTTTCAGGCCACATGGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAAC 2100
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Db   2041 TCTACTTTCAGGCCACATGGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAAC 2100

Qy   2101 TTTCACCTTCATATATTTGTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGA 2160
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Db   2101 TTTCACCTTCATATATTTGTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGA 2160

Qy   2161 TGAAATGTAAATACTGTTTTTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTA 2220
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   2161 TGAAATGTAAATACTGTTTTTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTA 2220

Qy   2221 TGTTGATAAAAG 2232
          ||||||||||||
Db   2221 TGTTGATAAAAG 2232
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RESULT 2
AAF21105
ID AAF21105 standard; DNA; 143068 BP.
XX
AC AAF21105;
XX
DT 14-MAR-2001 (first entry)
XX
DE Human low adenosine antisense oligonucleotide related sequence #2672.
XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW human; airway disorder; bronchoconstriction; lung inflammation;
KW surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW respiratory obstruction; pulmonary obstruction; impeded respiration;
KW surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200062736-A2.
XX
PD 26-OCT-2000.
XX
PF 24-MAR-2000; 2000WO-US08020.
XX
PR 06-APR-1999; 99US-0127958.
XX
PA (UYEC-) UNIV EAST CAROLINA.
PA (NYCE/) NYCE J W.
XX
PI Nyce JW;
XX
DR WPI; 2000-679539/66.
XX
PT Low adenosine (A) content antisense oligonucleotides which do not
PT trigger adenosine receptors during metabolism, useful e.g. for treating
PT cancers and respiratory obstructions -
XX
PS Disclosure; Page 924-957; 1592pp; English.
XX
CC The present invention describes low adenosine (A) content antisense
CC oligonucleotides and compositions (I) comprising them. In the antisense
CC oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC The antisense oligonucleotides and (I) can be used to down-regulate the
CC expression and or activity of target polypeptides associated with
CC lung/respiratory disorders and malignancies, such as stimulating and
CC activating peptide factors and transmitters, transcription factors,
CC immunoglobulins and antibodies, antibody receptors, cytokines and
CC chemokines, endogenously produced specific and non-specific enzymes,
CC binding proteins, adhesion molecules and their receptors, cytokine and
CC chemokine receptors, adenosine receptors, bradykinin receptors, central
CC nervous system (CNS) and peripheral nervous and non-nervous system
CC receptors, CNS and peripheral nervous and non-nervous system peptide
CC transmitters, defensins, growth factors, vasoactive peptides and
CC receptors, binding proteins and malignancy associated proteins. The
CC antisense oligonucleotides may be used in this way to treat disorders
CC including respiratory obstruction (especially pulmonary obstruction
CC and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC and/or surfactant hypoproduction which are associated with a disease or
CC condition selected from pulmonary vasoconstriction, inflammation,
CC allergies, asthma, impeded respiration, respiratory distress syndrome
CC (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC fragments and antisense oligonucleotides used in the exemplification of
CC the present invention.
XX
SQ Sequence 143068 BP; 41194 A; 30122 C; 32403 G; 39349 T; 0 other;

Query Match 56.0%; Score 1250.8; DB 21; Length 143068;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 1252; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy    979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48253 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 48312

Qy   1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48313 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 48372

Qy   1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48373 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 48432

Qy   1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48433 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 48492

Qy   1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48493 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 48552

Qy   1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48553 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 48612

Qy   1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
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Db  48613 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 48672

Qy   1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
          |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db  48673 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 48732

Qy   1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48733 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 48792

Qy   1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48793 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 48852

Qy   1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48853 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 48912

Qy   1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48913 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 48972

Qy   1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48973 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 49032

Qy   1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49033 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 49092

Qy   1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49093 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 49152

Qy   1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49153 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 49212

Qy   1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49213 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 49272

Qy   1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49273 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 49332

Qy   2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49333 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 49392

Qy   2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49393 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 49452

Qy   2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
          |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49453 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 49506


RESULT 3
AAF21272
ID   AAF21272 standard; DNA; 143068 BP.
XX
AC   AAF21272;
XX
DT   14-MAR-2001  (first entry)
XX
DE   Human low adenosine antisense oligonucleotide related sequence #2839.
XX
KW   Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW   human; airway disorder; bronchoconstriction; lung inflammation;
KW   surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW   immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW   respiratory obstruction; pulmonary obstruction; impeded respiration;
KW   surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW   respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW   pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW   chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW   cancer; ss.
XX
OS   Homo sapiens.
XX
PN   WO200062736-A2.
XX
PD   26-OCT-2000.
XX
PF   24-MAR-2000; 2000WO-US08020.
XX
PR   06-APR-1999;   99US-0127958.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
PA   (NYCE/) NYCE J W.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-679539/66.
XX
PT   Low adenosine (A) content antisense oligonucleotides which do not
PT   trigger adenosine receptors during metabolism, useful e.g. for treating
PT   cancers and respiratory obstructions -
XX
PS   Disclosure; Page 1186-1219; 1592pp; English.
XX
CC   The present invention describes low adenosine (A) content antisense
CC   oligonucleotides and compositions (I) comprising them. In the antisense
CC   oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC   (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC   immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC   The antisense oligonucleotides and (I) can be used to down-regulate the
CC   expression and or activity of target polypeptides associated with
CC   lung/respiratory disorders and malignancies, such as stimulating and
CC   activating peptide factors and transmitters, transcription factors,
CC   immunoglobulins and antibodies, antibody receptors, cytokines and
CC   chemokines, endogenously produced specific and non-specific enzymes,
CC   binding proteins, adhesion molecules and their receptors, cytokine and
CC   chemokine receptors, adenosine receptors, bradykinin receptors, central
CC   nervous system (CNS) and peripheral nervous and non-nervous system
CC   receptors, CNS and peripheral nervous and non-nervous system peptide
CC   transmitters, defensins, growth factors, vasoactive peptides and
CC   receptors, binding proteins and malignancy associated proteins. The
CC   antisense oligonucleotides may be used in this way to treat disorders
CC   including respiratory obstruction (especially pulmonary obstruction
CC   and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC   and/or surfactant hypoproduction which are associated with a disease or
CC   condition selected from pulmonary vasoconstriction, inflammation,
CC   allergies, asthma, impeded respiration, respiratory distress syndrome
CC   (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC   hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC   pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC   and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC   fragments and antisense oligonucleotides used in the exemplification of
CC   the present invention.
XX
SQ   Sequence 143068 BP; 41194 A; 30122 C; 32403 G; 39349 T; 0 other;

  Query Match             56.0%;  Score 1250.8;  DB 21;  Length 143068;
  Best Local Similarity   99.8%;  Pred. No. 0;
  Matches 1252;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy    979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48253 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 48312

Qy   1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db  48313 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 48372

Qy   1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48373 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 48432

Qy   1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48433 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 48492

Qy   1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48493 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 48552

Qy   1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48553 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 48612

Qy   1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48613 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 48672

Qy   1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
          ||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||||
Db  48673 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 48732

Qy   1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48733 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 48792

Qy   1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48793 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 48852

Qy   1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48853 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 48912

Qy   1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48913 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 48972

Qy   1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48973 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 49032

Qy   1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
          ||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db  49033 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 49092

Qy   1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49093 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 49152

Qy   1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49153 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 49212

Qy   1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49213 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 49272

Qy   1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49273 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 49332

Qy   2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49333 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 49392

Qy   2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49393 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 49452

Qy   2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49453 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 49506
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RESULT 4
AAA34983
ID AAA34983 standard; DNA; 143068 BP.
XX
AC AAA34983;
XX
DT 28-JUL-2000 (first entry)
XX
DE Human adenosine receptor related polynucleotide SEQ ID NO:2672.
XX
KW Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW phosphorothioate; impaired respiration; inflammation; allergy;
KW allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS Homo sapiens.
XX
PN WO200009525-A2.
XX
PD 24-FEB-2000.
XX
PF 03-AUG-1999; 99WO-US17712.
XX
PR 03-AUG-1998; 98US-0095212.
XX
PA (UYEC-) UNIV EAST CAROLINA.
XX
PI Nyce JW;
XX
DR WPI; 2000-205971/18.
XX
PT New antisense oligonucleotides useful for treating e.g. pulmonary
PT vasoconstriction, inflammation, allergies, asthma, hypertension,
PT bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT cancers -
XX
PS Disclosure; Page 851-882; 1343pp; English.
XX
CC The present invention describes a new composition comprising an
CC antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC inflammation. The ON can have antiinflammatory, antiallergic,
CC antiasthmatic, cytostatic and analgesic activities. The compositions are
CC useful for the treatment of diseases associated with inflammation,
CC impaired airways, including lung disease and diseases whose secondary
CC effects afflict the lungs of a subject. They can be used for treating
CC e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC carcinomas, and cancers which may metastasise to the lungs, including
CC breast and prostate cancer. The reduction of the adenosine content of
CC the ONs reduces side effects. The A-containing ONs break down with the
CC release of deoxyadenosine which activates adenosine receptors causing
CC bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC nucleotide sequences given in the sequence listing from the present
CC invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC 185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC differ from the previously named sequences. SEQ ID NO:11 to 1680
CC (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC invention. N.B. Sequences given in the disclosure of the present
CC invention do not match up with their corresponding SEQ ID NO: sequences
CC given in the sequence listing.

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XX
SQ   Sequence 143068 BP; 41194 A; 30122 C; 32402 G; 39350 T; 0 other;

  Query Match            56.0%;  Score 1250.8;  DB 21;  Length 143068;
  Best Local Similarity  99.8%;  Pred. No. 0;
  Matches 1252;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy     979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48253 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 48312

Qy    1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48313 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 48372

Qy    1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48373 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 48432

Qy    1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48433 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 48492

Qy    1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48493 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 48552

Qy    1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48553 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 48612

Qy    1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48613 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 48672

Qy    1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
           ||||||||||||||||||||||||||||||||||| |||||||||||||||||||||||
Db   48673 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 48732

Qy    1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48733 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 48792

Qy    1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48793 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 48852

Qy    1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48853 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 48912

Qy    1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48913 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 48972

Qy    1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48973 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 49032

Qy    1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
           ||||||||||||||||||||||||||||||||||||||||||| |||||||||||||||
Db   49033 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 49092

Qy    1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49093 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 49152

Qy    1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49153 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 49212

Qy    1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db   49213 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 49272

Qy    1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49273 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 49332

Qy    2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49333 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 49392

Qy    2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49393 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 49452

Qy    2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49453 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 49506


RESULT 5
AAA35150
ID   AAA35150 standard; DNA; 143068 BP.
XX
AC   AAA35150;
XX
DT   28-JUL-2000  (first entry)
XX
DE   Human adenosine receptor related polynucleotide 2nd SEQ ID NO:24.
XX
KW   Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW   phosphorothioate; impaired respiration; inflammation; allergy;
KW   allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW   lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW   respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW   pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW   cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS   Homo sapiens.
XX
PN   WO200009525-A2.
XX
PD   24-FEB-2000.
XX
PF   03-AUG-1999;   99WO-US17712.
XX
PR   03-AUG-1998;   98US-0095212.
XX
PA   (UYEC-) UNIV EAST CAROLINA.
XX
PI   Nyce JW;
XX
DR   WPI; 2000-205971/18.
XX
PT   New antisense oligonucleotides useful for treating e.g. pulmonary
PT   vasoconstriction, inflammation, allergies, asthma, hypertension,
PT   bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT   cancers -
XX
PS   Disclosure; Page 1106-1138; 1343pp; English.
XX
CC   The present invention describes a new composition comprising an
CC   antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC   targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC   inflammation. The ON can have antiinflammatory, antiallergic,
CC   antiasthmatic, cytostatic and analgesic activities. The compositions are
CC   useful for the treatment of diseases associated with inflammation,
CC   impaired airways, including lung disease and diseases whose secondary
CC   effects afflict the lungs of a subject. They can be used for treating
CC   e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC   asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC   fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC   pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
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CC   carcinomas, and cancers which may metastasise to the lungs, including
CC   breast and prostate cancer. The reduction of the adenosine content of
CC   the ONs reduces side effects. The A-containing ONs break down with the
CC   release of deoxyadenosine which activates adenosine receptors causing
CC   bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC   nucleotide sequences given in the sequence listing from the present
CC   invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC   185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC   differ from the previously named sequences. SEQ ID NO:11 to 1680
CC   (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC   invention. N.B. Sequences given in the disclosure of the present
CC   invention do not match up with their corresponding SEQ ID NO: sequences
CC   given in the sequence listing.
XX
SQ   Sequence 143068 BP; 41194 A; 30126 C; 32402 G; 39346 T; 0 other;

  Query Match           56.0%;  Score 1250.8;  DB 21;  Length 143068;
  Best Local Similarity  99.8%;  Pred. No. 0;
  Matches 1252;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy     979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48253 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 48312

Qy    1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48313 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 48372

Qy    1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48373 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 48432

Qy    1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48433 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 48492

Qy    1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48493 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 48552

Qy    1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48553 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 48612

Qy    1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48613 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 48672

Qy    1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48673 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 48732

Qy    1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48733 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 48792

Qy    1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48793 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 48852

Qy    1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48853 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 48912

Qy    1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48913 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 48972

Qy    1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   48973 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 49032

Qy    1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
           ||||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||
Db   49033 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 49092

Qy    1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49093 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 49152

Qy    1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49153 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 49212

Qy    1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49213 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 49272

Qy    1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49273 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 49332

Qy    2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49333 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 49392

Qy    2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49393 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 49452

Qy    2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   49453 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 49506
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RESULT 6
ABL68124
ID   ABL68124 standard; DNA; 143068 BP.
XX
AC   ABL68124;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Ovary cancer related gene sequence SEQ ID NO:6461.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
PR   25-SEP-2000; 2000US-234923P.
PR   25-SEP-2000; 2000US-234924P.
PR   25-SEP-2000; 2000US-235077P.
PR   25-SEP-2000; 2000US-235082P.
PR   25-SEP-2000; 2000US-235134P.
PR   25-SEP-2000; 2000US-235280P.
PR   26-SEP-2000; 2000US-235637P.
PR   26-SEP-2000; 2000US-235638P.
PR   27-SEP-2000; 2000US-235711P.
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PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 6461; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 143068 BP; 41194 A; 30122 C; 32403 G; 39349 T; 0 other;

Query Match 56.0%; Score 1250.8; DB 24; Length 143068;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 1252; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy    979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48253 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 48312

Qy   1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48313 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 48372

Qy   1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48373 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 48432

Qy   1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48433 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 48492

Qy   1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48493 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 48552

Qy   1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48553 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 48612

Qy   1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48613 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 48672

Qy   1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
          ||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||||
Db  48673 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 48732

Qy   1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48733 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 48792

Qy   1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48793 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 48852

Qy   1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48853 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 48912

Qy   1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48913 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 48972

Qy   1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  48973 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 49032

Qy   1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
          ||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||||
Db  49033 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 49092

Qy   1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49093 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 49152

Qy   1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49153 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 49212

Qy   1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49213 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 49272

Qy   1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49273 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 49332

Qy   2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49333 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 49392

Qy   2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49393 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 49452

Qy   2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  49453 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 49506
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RESULT 7
AAA35151
ID AAA35151 standard; DNA; 149412 BP.
XX
AC AAA35151;
XX
DT 28-JUL-2000 (first entry)
XX
DE Human adenosine receptor related polynucleotide 2nd SEQ ID NO:25.
XX
KW Human; adenosine receptor; low adenosine antisense oligonucleotide;
KW phosphorothioate; impaired respiration; inflammation; allergy;
KW allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
KW antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway;
KW lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
KW respiratory distress syndrome; pain; cystic fibrosis; emphysema;
KW pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
KW cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
XX
OS Homo sapiens.
XX
PN WO200009525-A2.
XX
PD 24-FEB-2000.
XX
PF 03-AUG-1999; 99WO-US17712.
XX
PR 03-AUG-1998; 98US-0095212.
XX
PA (UYEC-) UNIV EAST CAROLINA.
XX
PI Nyce JW;
XX
DR WPI; 2000-205971/18.
XX
PT New antisense oligonucleotides useful for treating e.g. pulmonary
PT vasoconstriction, inflammation, allergies, asthma, hypertension,
PT bronchitis, emphysema, respiratory distress syndrome, ischemia or
PT cancers -
XX
PS Disclosure; Page 1138-1171; 1343pp; English.
XX
CC The present invention describes a new composition comprising an
CC antisense oligonucleotide (ON) with low adenosine (up to 15%), which
CC targets nucleic acids involved in bronchoconstriction, allergies, and/or
CC inflammation. The ON can have antiinflammatory, antiallergic,
CC antiasthmatic, cytostatic and analgesic activities. The compositions are
CC useful for the treatment of diseases associated with inflammation,
CC impaired airways, including lung disease and diseases whose secondary
CC effects afflict the lungs of a subject. They can be used for treating
CC e.g. ischaemic conditions, pulmonary vasoconstriction, allergies,
CC asthma, impeded respiration, respiratory distress syndrome, pain, cystic
CC fibrosis, pulmonary hypertension, emphysema, chronic obstructive
CC pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
CC carcinomas, and cancers which may metastasise to the lungs, including
CC breast and prostate cancer. The reduction of the adenosine content of
CC the ONs reduces side effects. The A-containing ONs break down with the
CC release of deoxyadenosine which activates adenosine receptors causing
CC bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
CC nucleotide sequences given in the sequence listing from the present
CC invention, which correspond to SEQ ID NO:1 to 2815, and then the last
CC 185 sequences are also called SEQ ID NO:1 to 185, but the sequences
CC differ from the previously named sequences. SEQ ID NO:11 to 1680
CC (AAA32323 to AAA33992) are specifically claimed ONs from the present
CC invention. N.B. Sequences given in the disclosure of the present
CC invention do not match up with their corresponding SEQ ID NO: sequences
CC given in the sequence listing.
XX
SQ Sequence 149412 BP; 43049 A; 31388 C; 33852 G; 41123 T; 0 other;

Query Match 56.0%; Score 1250.8; DB 21; Length 149412;
Best Local Similarity 99.8%; Pred. No. 0;

Matches 1252; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
Qy     979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54597 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 54656

Qy    1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54657 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 54716

Qy    1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54717 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 54776

Qy    1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54777 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 54836

Qy    1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54837 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 54896

Qy    1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54897 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 54956

Qy    1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   54957 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 55016

Qy    1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
           |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db   55017 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 55076

Qy    1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55077 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 55136

Qy    1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55137 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 55196

Qy    1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55197 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 55256

Qy    1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55257 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 55316

Qy    1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55317 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 55376

Qy    1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
           |||||||||||||||||||||||||||||||||||| |||||||||||||||||||||||
Db   55377 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 55436

Qy    1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55437 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 55496

Qy    1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55497 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 55556

Qy    1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55557 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 55616

Qy    1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   55617 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 55676
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Qy   2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55677 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 55736

Qy   2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55737 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 55796

Qy   2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55797 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 55850
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RESULT 8
AAF21273
ID AAF21273 standard; DNA; 152740 BP.
XX
AC AAF21273;
XX
DT 14-MAR-2001 (first entry)
XX
DE Human low adenosine antisense oligonucleotide related sequence #2840.
XX
KW Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
KW human; airway disorder; bronchoconstriction; lung inflammation;
KW surfactant depletion; respiratory; bronchodilator; antiinflammatory;
KW immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
KW respiratory obstruction; pulmonary obstruction; impeded respiration;
KW surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
KW respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
KW pulmonary hypertension; emphysema; pulmonary transplantation rejection;
KW chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
KW cancer; ss.
XX
OS Homo sapiens.
XX
PN WO200062736-A2.
XX
PD 26-OCT-2000.
XX
PF 24-MAR-2000; 2000WO-US08020.
XX
PR 06-APR-1999; 99US-0127958.
XX
PA (UYEC-) UNIV EAST CAROLINA.
PA (NYCE/) NYCE J W.
XX
PI Nyce JW;
XX
DR WPI; 2000-679539/66.
XX
PT Low adenosine (A) content antisense oligonucleotides which do not
PT trigger adenosine receptors during metabolism, useful e.g. for treating
PT cancers and respiratory obstructions -
XX
PS Disclosure; Page 1219-1254; 1592pp; English.
XX
CC The present invention describes low adenosine (A) content antisense
CC oligonucleotides and compositions (I) comprising them. In the antisense
CC oligonucleotides the A is replaced by a 'Universal' or alternative base.
CC (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
CC immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
CC The antisense oligonucleotides and (I) can be used to down-regulate the
CC expression and or activity of target polypeptides associated with
CC lung/respiratory disorders and malignancies, such as stimulating and
CC activating peptide factors and transmitters, transcription factors,
CC immunoglobulins and antibodies, antibody receptors, cytokines and
CC chemokines, endogenously produced specific and non-specific enzymes,
CC binding proteins, adhesion molecules and their receptors, cytokine and
CC chemokine receptors, adenosine receptors, bradykinin receptors, central
CC nervous system (CNS) and peripheral nervous and non-nervous system
CC receptors, CNS and peripheral nervous and non-nervous system peptide
CC transmitters, defensins, growth factors, vasoactive peptides and
CC receptors, binding proteins and malignancy associated proteins. The
CC antisense oligonucleotides may be used in this way to treat disorders
CC including respiratory obstruction (especially pulmonary obstruction
CC and/or bronchoconstriction) and/or lung inflammation, allergy(ies)
CC and/or surfactant hypoproduction which are associated with a disease or
CC condition selected from pulmonary vasoconstriction, inflammation,
CC allergies, asthma, impeded respiration, respiratory distress syndrome
CC (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
CC hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
CC pulmonary transplantation rejection, pulmonary infections, bronchitis,
CC and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
CC fragments and antisense oligonucleotides used in the exemplification of
CC the present invention.
XX
SQ Sequence 152740 BP; 44169 A; 32023 C; 34549 G; 41999 T; 0 other;

Query Match 56.0%; Score 1250.8; DB 21; Length 152740;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 1252; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy    979 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 1038
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54597 AGCCTTTTTCACATAGCTCTTGGCTGTAGGATTGCCCCACTCCAAAAACCAGTGTGTGGA 54656

Qy   1039 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 1098
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54657 GGTCCAGGAGTGAGACCAGGAAAGAATGTGAAAGTGACTACACAAGGACTCCTCGATGGT 54716

Qy   1099 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 1158
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54717 CGTGGAAAAGGAAAGTCAATTGGCAGAGCCCCTGAAGCCAGTCTTCAGGACAAAGAAGGA 54776

Qy   1159 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 1218
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54777 GCCTAGAGACAGAAATGACAGATCTCTGCTTTGGAAATCACACGTCTGGCTTCACAGATG 54836

Qy   1219 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 1278
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54837 TGTGATTCACAGTGTGAATCTTGGTGTCTACGTTACCAGGCAGGAAGGCTGAGAGGAGAG 54896

Qy   1279 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 1338
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54897 AGACTCCAGCTGGGTTGGAAAACAGTATTTTCCAAACTACCTTCCAGTTCCTCATTTTTG 54956

Qy   1339 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 1398
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  54957 AATACAGGCATAGAGTTCAGACTTTTTTTAAATAGTAAAAATAAAATTAAAGCTGAAAAC 55016

Qy   1399 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTGCTATCATGTCAAACGTGAAAAT 1458
          |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db  55017 TGCAACTTGTAAATGTGGTAAAGAGTTAGTTTGAGTTACTATCATGTCAAACGTGAAAAT 55076

Qy   1459 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 1518
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55077 GCTGTATTAGTCACAGAGATAATTCTAGCTTTGAGCTTAAGAATTTTGAGCAGGTGGTAT 55136

Qy   1519 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 1578
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55137 GTTTGGGAGACTGCTGAGTCAACCCAATAGTTGTTGATTGGCAGGAGTTGGAAGTGTGTG 55196

Qy   1579 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 1638
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55197 ATCTGTGGGCACATTAGCCTATGTGCATGCAGCATCTAAGTAATGATGTCGTTTGAATCA 55256

Qy   1639 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 1698
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55257 CAGTATACGCTCCATCGCTGTCATCTCAGCTGGATCTCCATTCTCTCAGGCTTGCTGCCA 55316

Qy   1699 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 1758
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55317 AAAGCCTTTTGTGTTTTGTTTTGTATCATTATGAAGTCATGCGTTTAATCACATTCGAGT 55376
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Qy   1759 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTAATTTGCCAGTGGGAA 1818
          ||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||
Db  55377 GTTTCAGTGCTTCGCAGATGTCCTTGATGCTCATATTGTTCCCTATTTTGCCAGTGGGAA 55436

Qy   1819 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 1878
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55437 CTCCTAAATCAAATTGGCTTCTAATCAAAGCTTTTAAACCCTATTGGTAAAGAATGGAAG 55496

Qy   1879 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 1938
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55497 GTGGAGAAGCTCCCTGAAGTAAGCAAAGACTTTCCTCTTAGTCGAGCCAAGTTAAGAATG 55556

Qy   1939 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 1998
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55557 TTCTTATGTTGCCCAGTGTGTTTCTGATCTGATGCAAGCAAGAAACACTGGGCTTCTAGA 55616

Qy   1999 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 2058
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55617 ACCAGGCAACTTGGGAACTAGACTCCCAAGCTGGACTATGGCTCTACTTTCAGGCCACAT 55676

Qy   2059 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 2118
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55677 GGCTAAAGAAGGTTTCAGAAAGAAGTGGGGACAGAGCAGAACTTTCACCTTCATATATTT 55736

Qy   2119 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 2178
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55737 GTATGATCCTAATGAATGCATAAAATGTTAAGTTGATGGTGATGAAATGTAAATACTGTT 55796

Qy   2179 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 2232
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db  55797 TTTAACAACTATGATTTGGAAAATAAATCAATGCTATAACTATGTTGATAAAAG 55850
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RESULT 9
AAQ96298
ID AAQ96298 standard; cDNA; 1979 BP.
XX
AC AAQ96298;
XX
DT 29-DEC-1995 (first entry)
XX
DE Human monocyte chemoattractant protein-1 receptor MCP-1RB.
XX
KW Monocyte chemoattractant protein-1 receptor; MCR-1R; chemokine; ss.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT CDS 81..1160
FT /*tag= a
XX
PN WO9519436-A.
XX
PD 20-JUL-1995.
XX
PF 11-JAN-1995; 95WO-US00476.
XX
PR 13-JAN-1994; 94US-0182962.
XX
PA (REGC) UNIV CALIFORNIA.
XX
PI Charo I, Coughlin S;
XX
DR WPI; 1995-263866/34.
DR P-PSDB; AAR79166.
XX
PT DNA encoding monocyte chemo-attractant protein-1 receptor - used partic.
PT for identifying antagonists and for treating diseases characterised by
PT monocytic infiltrates
XX
PS Disclosure; Fig 2; 84pp; English.
XX
CC To identify and clone new members of the chemokine receptor gene
CC family, degenerate oligo primers were designed corresp. to the
CC conserved sequences R79167 in the second and R79168 in the third
CC transmembrane domains of the MIP-1alpha/RANTES receptor, the IL-8
CC receptors and the HUMSTRS orphan receptor (GenBank Accession #M99293.
CC The degenerate oligo incorporating EcoRI and XhoI sites at their 5'
CC ends are Q96299 and Q96300. Amplification of cDNA derived from MM6
CC cells with the primers yieled a number of PCR products. One cDNA
CC appeared to encode a novel protein. To obtain a full-length version
CC of this clone, a MM6 cDNA library was constructed in pFROG and probed
CC with the PCR product. A 2.1 kb cDNA clone was obtd. Analysis of
CC additional clones in the MM6 cDNA library revealed a second
CC sequence that was identical to the 2.1 kb cDNA sequence first obtd.
CC from the 5' UTR through the putative seventh transmembrane domain
CC but contained a different cytoplasmic tail. The second sequence
CC appears to represent alternative splicing of the carboxyl-terminal
CC tail of the MCP-1R protein. The two sequences are denoted MCP-1RA
CC and MCP-1RB (see Q96297/R79165 & Q96298/R79166). Active mature
CC MCP-1RA has a predicted mol. wt. of about 42,000 daltons. MCP-1RB
CC has a mol. wt. of about 41,000 daltons.
XX
SQ Sequence 1979 BP; 530 A; 434 C; 452 G; 563 T; 0 other;

Query Match 43.9%; Score 980; DB 16; Length 1979;
Best Local Similarity 100.0%; Pred. No. 9.8e-263;
Matches 980; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 GGATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCT 60
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     42 GGATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCT 101

Qy     61 CGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGAT 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    102 CGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGAT 161

Qy    121 TACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCG 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    162 TACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCG 221

Qy    181 CTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTA 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    222 CTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTA 281

Qy    241 ATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCT 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    282 ATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCT 341

Qy    301 GATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTC 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    342 GATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTC 401

Qy    361 TTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGA 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    402 TTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGA 461

Qy    421 ATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTT 480
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    462 ATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTT 521

Qy    481 GCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTG 540
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    522 GCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTG 581

Qy    541 GCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTT 600
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    582 GCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTT 641

Qy    601 TATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAAC 660
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    642 TATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAAC 701

Qy    661 ATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAA 720
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    702 ATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAA 761
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Qy    721 ACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACC 780
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    762 ACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACC 821

Qy    781 ATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACC 840
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    822 ATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACC 881

Qy    841 TTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACG 900
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    882 TTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACG 941

Qy    901 CAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTC 960
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    942 CAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTC 1001

Qy    961 GTTGGGGAGAAGTTCAGAAG 980
          ||||||||||||||||||||
Db   1002 GTTGGGGAGAAGTTCAGAAG 1021
```

RESULT 10
AAS12140
ID AAS12140 standard; DNA; 1083 BP.
XX
AC AAS12140;
XX
DT 04-DEC-2001 (first entry)
XX
DE Human wild-type CCR2-64V polynucleotide.
XX
KW Human; CCR2 receptor; CCR2-64I; CCR2-64V; gene therapy; atherosclerosis;
KW single nucleotide polymorphism; hypercholesterolaemia; ds.
XX
OS Homo sapiens.
XX
PN WO200162796-A1.
XX
PD 30-AUG-2001.
XX
PF 22-FEB-2001; 2001WO-GB00755.
XX
PR 22-FEB-2000; 2000GB-0004183.
XX
PA (SMIK) SMITHKLINE BEECHAM PLC.
XX
PI Valdes AM, Groot PHE, Spurr NK;
XX
DR WPI; 2001-550086/61.
DR P-PSDB; AAU07614.
XX
PT Diagnosing atherosclerosis or susceptibility to atherosclerosis in a
PT subject, by determining a single nucleotide polymorphism in specific
PT codon of a polynucleotide encoding human CCR2 receptor in genome of the
PT subject -
XX
PS Claim 3; Page 20-21; 28pp; English.
XX
CC The invention relates to diagnosing atherosclerosis (or susceptibility
CC to) in a subject by determining expression or activity of the human
CC CCR2-64I polypeptide (a polymorphic variant form of the human CCR2
CC receptor) or the CCR2-64V polypeptide (human CCR2 receptor), by screening
CC for a single nucleotide polymorphism in codon 64 of the polynucleotide
CC encoding the CCR2 receptor. This results in production of CCR2-64I,
CC whereby polymorphic variants are associated with a lower incidence of
CC atherosclerosis. The presence or amount of CCR2-64I/V in a sample can
CC also be analysed. The sequences of the invention can be used for
CC predicting the response of a patient to drug treatment, for predicting
CC the disease outcome in a patient and also for the production of a
CC treatment for hypercholesterolaemia. The sequence represents DNA encoding
CC the wild-type receptor polypeptide CCR2-64V.
XX

SQ Sequence 1083 BP; 255 A; 260 C; 247 G; 321 T; 0 other;

Query Match 42.2%; Score 941; DB 22; Length 1083;
Best Local Similarity 100.0%; Pred. No. 5.5e-252;
Matches 941; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy     40 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 99
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 60

Qy    100 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 159
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 120

Qy    160 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 219
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 180

Qy    220 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 279
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 240

Qy    280 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 339
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 300

Qy    340 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 399
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 360

Qy    400 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 459
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 420

Qy    460 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 519
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 480

Qy    520 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 579
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 540

Qy    580 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 639
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 600

Qy    640 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 699
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 660

Qy    700 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 759
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 720

Qy    760 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 819
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 780

Qy    820 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 879
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 840

Qy    880 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 939
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 900

Qy    940 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 980
          |||||||||||||||||||||||||||||||||||||||||
Db    901 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 941
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RESULT 11
AAS12139

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ID   AAS12139 standard; DNA; 1083 BP.
XX
AC   AAS12139;
XX
DT   04-DEC-2001  (first entry)
XX
DE   Human CCR2-64I polymorphic variant polynucleotide.
XX
KW   Human; CCR2 receptor; CCR2-64I; CCR2-64V; gene therapy; atherosclerosis;
KW   single nucleotide polymorphism; hypercholesterolaemia; ds.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   variation       replace(190,G)
FT                   /*tag=  a
FT                   /standard_name= "Single nucleotide polymorphism"
XX
PN   WO200162796-A1.
XX
PD   30-AUG-2001.
XX
PF   22-FEB-2001; 2001WO-GB00755.
XX
PR   22-FEB-2000; 2000GB-0004183.
XX
PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
PI   Valdes AM,  Groot PHE,  Spurr NK;
XX
DR   WPI; 2001-550086/61.
DR   P-PSDB; AAU07613.
XX
PT   Diagnosing atherosclerosis or susceptibility to atherosclerosis in a
PT   subject, by determining a single nucleotide polymorphism in specific
PT   codon of a polynucleotide encoding human CCR2 receptor in genome of the
PT   subject -
XX
PS   Claim 3; Page 20; 28pp; English.
XX
CC   The invention relates to diagnosing atherosclerosis (or susceptibility
CC   to) in a subject by determining expression or activity of the human
CC   CCR2-64I polypeptide (a polymorphic variant form of the human CCR2
CC   receptor) or the CCR2-64V polypeptide (human CCR2 receptor), by screening
CC   for a single nucleotide polymorphism in codon 64 of the polynucleotide
CC   encoding the CCR2 receptor. This results in production of CCR2-64I,
CC   whereby polymorphic variants are associated with a lower incidence of
CC   atherosclerosis. The presence or amount of CCR2-64I/V in a sample can
CC   also be analysed. The sequences of the invention can be used for
CC   predicting the response of a patient to drug treatment, for predicting
CC   the disease outcome in a patient and also for the production of a
CC   treatment for hypercholesterolaemia. The sequence represents DNA encoding
CC   the polymorphic variant polypeptide CCR2-64I.
XX
SQ   Sequence 1083 BP; 256 A; 260 C; 246 G; 321 T; 0 other;

  Query Match             42.1%;  Score 939.4;  DB 22;  Length 1083;
  Best Local Similarity   99.9%;  Pred. No. 1.5e-251;
  Matches  940;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      40 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 99
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 60

Qy     100 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 159
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 120

Qy     160 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 219
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 180

Qy     220 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 279
           ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 ATGCTGGTCATCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 240

Qy     280 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 339
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 300

Qy     340 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 399
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 360

Qy     400 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 459
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 420

Qy     460 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 519
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 480

Qy     520 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 579
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 540

Qy     580 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 639
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 600

Qy     640 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 699
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 660

Qy     700 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 759
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 720

Qy     760 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 819
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 780

Qy     820 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 879
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 840

Qy     880 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 939
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 900

Qy     940 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 980
           |||||||||||||||||||||||||||||||||||||||||
Db     901 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 941


RESULT 12
AAT96976
ID   AAT96976 standard; cDNA; 1083 BP.
XX
AC   AAT96976;
XX
DT   27-FEB-1998  (first entry)
XX
DE   Human monocyte chemoattractant protein 1 receptor encoding cDNA.
XX
KW   Human; MCP-1; monocyte chemoattractant protein; receptor; tumour;
KW   inflammatory disease; viral; allergy; diabetes; ds.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..1083
FT                   /*tag=  a
FT                   /product= Monocyte_chemoattractant_protein_1_receptor
XX
PN   JP09238688-A.
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XX
PD   16-SEP-1997.
XX
PF   11-MAR-1996;   96JP-0053574.
XX
PR   11-MAR-1996;   96JP-0053574.
XX
PA   (TAKE ) TAKEDA CHEM IND LTD.
XX
DR   WPI; 1997-506557/47.
DR   P-PSDB; AAW35833.
XX
PT   DNA encoding human monocyte chemoattractant protein 1 receptor -
PT   used to treat tumours and inflammatory, viral, infectious, allergic,
PT   diabetic and central nervous system diseases
XX
PS   Claim 1; Page 12; 15pp; Japanese.
XX
CC   The present sequence encodes human monocyte chemoattractant protein 1
CC   (MCP-1) receptor protein. The MCP-1 receptor protein and encoding DNA
CC   are used for the prevention and treatment of tumours and inflammatory,
CC   viral, infectious, allergic, diabetic and central nervous system
CC   diseases.
XX
SQ   Sequence 1083 BP; 257 A; 259 C; 245 G; 322 T; 0 other;

  Query Match             42.0%;  Score 937.8;  DB 18;  Length 1083;
  Best Local Similarity   99.8%;  Pred. No. 4.3e-251;
  Matches  939;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      40 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 99
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 60

Qy     100 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 159
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 120

Qy     160 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 219
           |||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db     121 GGGGCCCAACTCCTGCCTCCACTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 180

Qy     220 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 279
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 240

Qy     280 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 339
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 300

Qy     340 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 399
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 360

Qy     400 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 459
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 420

Qy     460 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 519
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 480

Qy     520 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 579
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 540

Qy     580 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 639
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 600

Qy     640 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 699
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 660

Qy     700 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 759
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 720

Qy     760 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 819
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAT 780

Qy     820 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 879
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 840

Qy     880 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 939
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 900

Qy     940 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 980
           |||||||||||||||||||||||||||||||||||||||||
Db     901 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 941


RESULT 13
ABI97976
ID   ABI97976 standard; cDNA; 1083 BP.
XX
AC   ABI97976;
XX
DT   18-FEB-2002  (first entry)
XX
DE   Non-endogenous human GPCR cDNA, SEQ ID NO: 472.
XX
KW   Human; G protein-coupled receptor; GPCR; non-endogenous; mutant;
KW   constitutively activated GPCR; agonist; disease; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO200177172-A2.
XX
PD   18-OCT-2001.
XX
PF   05-APR-2001; 2001WO-US11098.
XX
PR   07-APR-2000; 2000US-195747P.
XX
PA   (AREN-) ARENA PHARM INC.
XX
PI   Lehmann-Bruinsma K,  Liaw CW,  Lin I;
XX
DR   WPI; 2001-648759/74.
DR   P-PSDB; ABB56340.
XX
PT   Identifying agonists of G protein-coupled receptors (GPCRs) for use in
PT   disease treatment, comprises contacting candidate compounds with
PT   versions of GPCRs -
XX
PS   Example 2; Page 273-274; 394pp; English.
XX
CC   The invention relates to G protein-coupled receptors (GPCRs) for which
CC   the endogenous ligand has been identified. Non-endogenous
CC   constitutively activated versions of known GPCRs are used in the
CC   invention for the direct identification of candidate compounds as
CC   receptor agonists, inverse agonists or partial agonists. Such
CC   agonists are useful as therapeutic agents for diseases or disorders
CC   associated with GPCRs. The present sequence encodes a non-endogenous
CC   version of a known human GPCR.
XX
SQ   Sequence 1083 BP; 257 A; 260 C; 246 G; 320 T; 0 other;

  Query Match             42.0%;  Score 937.8;  DB 23;  Length 1083;
  Best Local Similarity   99.8%;  Pred. No. 4.3e-251;
  Matches  939;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;
```

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Qy      40 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 99
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 ATGCTGTCCACATCTCGTTCTCGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTC 60

Qy     100 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 159
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 ACCACCTTTTTTGATTATGATTACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATT 120

Qy     160 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 219
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 GGGGCCCAACTCCTGCCTCCGCTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAAC 180

Qy     220 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 279
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 ATGCTGGTCGTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTAC 240

Qy     280 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 339
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 CTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCAC 300

Qy     340 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 399
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 TCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTAT 360

Qy     400 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 459
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 CACATCGGTTATTTTGGCGGAATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTG 420

Qy     460 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 519
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 GCTATTGTCCATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACA 480

Qy     520 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 579
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 AGTGTGATCACCTGGTTGGTGGCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAA 540

Qy     580 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 639
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 TGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAAT 600

Qy     640 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 699
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 TTCCACACAATAATGAGGAACATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATC 660

Qy     700 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 759
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 TGCTACTCGGGAATCCTGAAAACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGG 720

Qy     760 GCAGTGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 819
           |||  ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 GCAAAGAGAGTCATCTTCACCATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAAC 780

Qy     820 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 879
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 ATTGTCATTCTCCTGAACACCTTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACC 840

Qy     880 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 939
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 AGTCAACTGGACCAAGCCACGCAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATC 900

Qy     940 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 980
           |||||||||||||||||||||||||||||||||||||||||
Db     901 AATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAGAAG 941
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RESULT 14
ABL32335/c
ID ABL32335 standard; DNA; 10528 BP.
XX
AC ABL32335;
XX
DT 26-MAR-2002 (first entry)

XX
DE Human immune system associated gene SEQ ID NO: 308.
XX
KW Human; immune system disease; cytosine methylation; antiasthmatic;
KW antiarteriosclerotic; antianaemic; cytostatic; nootropic;
KW neuroprotective; anti-HIV; anticonvulsant; ophthalmological;
KW antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
KW antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia;
KW acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy;
KW neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200200928-A2.
XX
PD 03-JAN-2002.
XX
PF 02-JUL-2001; 2001WO-EP07537.
XX
PR 30-JUN-2000; 2000DE-1032529.
PR 01-SEP-2000; 2000DE-1043826.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2002-130909/17.
XX
PT Nucleic acid comprising fragment of chemically modified gene, useful
PT for diagnosis and treatment of diseases associated with abnormal
PT cytosine methylation -
XX
PS Claim 1; SEQ ID NO 308; 32pp + Sequence Listing; German.
XX
CC The present invention provides a number of human immune system associated
CC genes which are modified by the methylation of cytosines. The sequences
CC can be used in the diagnosis and treatment of immune system disorders,
CC including eye diseases such as retinopathy, neovascular glaucoma and
CC macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid
CC leukaemia, Alzheimer's disease, AIDS, epilepsy, neurofibromatosis,
CC rheumatoid arthritis, psoriasis and inflammatory/ulcerative bowel
CC diseases. The present sequence is a gene of the invention.
XX
SQ Sequence 10528 BP; 2873 A; 86 C; 2164 G; 5405 T; 0 other;

Query Match 29.9%; Score 668.2; DB 24; Length 10528;
Best Local Similarity 80.2%; Pred. No. 2.6e-175;
Matches 784; Conservative 0; Mismatches 193; Indels 0; Gaps 0;

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Qy       3 ATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCTCG 62
             ||| |||||  |||||||||||||| ||||||||||||| || ||||||||||||||||
Db    2187 ATTAAACAAAAACGCATTTCCCCAATACATCCACAACATACTATCCACATCTCGTTCTCG 2128

Qy      63 GTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGATTA 122
           ||||||| |||||||||||| | || | || || ||||||||||||||| ||||| ||||
Db    2127 ATTTATCAAAAATACCAACGAAAACGATAAAAAAATCACCACCTTTTTTAATTATAATTA 2068

Qy     123 CGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCGCT 182
           || | |||||| |||||||||| |||| || ||||||    |||||||||| ||||||||
Db    2067 CGATACTCCCTATCATAAATTTAACGTAAAACAAATTAAAACCCAACTCCTACCTCCGCT 2008

Qy     183 CTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTAAT 242
           |||||||||  | |||||||||  |||| |   |||||| ||  ||||||||||||||||
Db    2007 CTACTCGCTAATATTCATCTTTAATTTTATAAACAACATACTAATCGTCCTCATCTTAAT 1948

Qy     243 AAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCTGA 302
           ||||| |||||| || || | ||| ||| |||||||||| |||||||| |||||||| |
Db    1947 AAACTACAAAAAACTAAAATACTTAACTAACATTTACCTACTCAACCTAACCATCTCTAA 1888

Qy     303 TCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTCTT 362
           ||| |||||||||||||||||||| |   |||||||| || ||||| | |   ||||
Db    1887 TCTACTTTTTCTTATTACTCTCCCATTATAAACTCACTCTACTACAAATAAATAAATCTT 1828
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Qy     363 TGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGAAT 422
Db    1827 TAAAAATACAATATACAAATTATTCACAAAACTATATCACATCGATTATTTTAACGAAAT 1768

Qy     423 CTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTTGC 482
Db    1767 CTTCTTCATCATCCTCCTAACAATCGATAAATACCTAACTATTATCCATACTATATTTAC 1708

Qy     483 TTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTGGC 542
Db    1707 TTTAAAAACCAAAACGATCACCTTTAAAATAATAACAAATATAATCACCTAATTAATAAC 1648

Qy     543 TGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTTTA 602
Db    1647 TATATTTACTTCTATCCCAAAAATCATCTTTACTAAATACCAAAAAAAAAATTCTATTTA 1588

Qy     603 TGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAACAT 662
Db    1587 TATCTATAACCCTTATTTTCCACGAAAATAAAATAATTTCCACACAATAATAAAAAACAT 1528

Qy     663 TTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAAAC 722
Db    1527 TTTAAAACTAATCCTACCGCTACTCATCATAATCATCTACTACTCGAAAATCCTAAAAAC 1468

Qy     723 CCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACCAT 782
Db    1467 CCTACTTCGATATCGAAACGAAAAAAAAAAACATAAAACAATAAAAATCATCTTCACCAT 1408

Qy     783 CATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACCTT 842
Db    1407 CATAATTATTTACTTTCTCTTCTAAACTCCCTATAACATTATCATTCTCCTAAACACCTT 1348

Qy     843 CCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACGCA 902
Db    1347 CCAAAAATTCTTCGACCTAAATAACTATAAAAACACCAATCAACTAAACCAAACCACGCA 1288

Qy     903 GGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTCGT 962
Db    1287 AATAACAAAAACTCTTAAAATAACTCACTACTACATCAATCCCATCATCTATACCTTCGT 1228

Qy     963 TGGGGAGAAGTTCAGAA 979
Db    1227 TAAAAAAAAATTCAAAA 1211
```

RESULT 15
ABL32334
ID ABL32334 standard; DNA; 10528 BP.
XX
AC ABL32334;
XX
DT 26-MAR-2002 (first entry)
XX
DE Human immune system associated gene SEQ ID NO: 307.
XX
KW Human; immune system disease; cytosine methylation; antiasthmatic;
KW antiarteriosclerotic; antianaemic; cytostatic; nootropic;
KW neuroprotective; anti-HIV; anticonvulsant; ophthalmological;
KW antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
KW antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia;
KW acute myeloid leukaemia; Alzheimer's disease; AIDS; epilepsy;
KW neurofibromatosis; rheumatoid arthritis; psoriasis; bowel disease;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200200928-A2.
XX
PD 03-JAN-2002.
XX
PF 02-JUL-2001; 2001WO-EP07537.
XX
PR 30-JUN-2000; 2000DE-1032529.
PR 01-SEP-2000; 2000DE-1043826.
XX
PA (EPIG-) EPIGENOMICS AG.
XX
PI Olek A, Piepenbrock C, Berlin K;
XX
DR WPI; 2002-130909/17.
XX
PT Nucleic acid comprising fragment of chemically modified gene, useful
PT for diagnosis and treatment of diseases associated with abnormal
PT cytosine methylation -
XX
PS Claim 1; SEQ ID NO 307; 32pp + Sequence Listing; German.
XX
CC The present invention provides a number of human immune system associated
CC genes which are modified by the methylation of cytosines. The sequences
CC can be used in the diagnosis and treatment of immune system disorders,
CC including eye diseases such as retinopathy, neovascular glaucoma and
CC macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid
CC leukaemia, Alzheimer's disease, AIDS, epilepsy, neurofibromatosis,
CC rheumatoid arthritis, psoriasis and inflammatory/ulcerative bowel
CC diseases. The present sequence is a gene of the invention.
XX
SQ Sequence 10528 BP; 3072 A; 86 C; 2419 G; 4951 T; 0 other;

Query Match 28.7%; Score 639.8; DB 24; Length 10528;
Best Local Similarity 78.0%; Pred. No. 2.2e-167;
Matches 770; Conservative 0; Mismatches 217; Indels 0; Gaps 0;

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Qy       1 GGATTGAACAAGGACGCATTTCCCCAGTACATCCACAACATGCTGTCCACATCTCGTTCT 60
Db    8340 GGATTGAATAAGGACGTATTTTTTTAGTATATTTATAATATGTTGTTTATATTTCGTTTT 8399

Qy      61 CGGTTTATCAGAAATACCAACGAGAGCGGTGAAGAAGTCACCACCTTTTTTGATTATGAT 120
Db    8400 CGGTTTATTAGAAATATTAACGAGAGCGGTGAAGAAGTTATTATTTTTTTTGATTATGAT 8459

Qy     121 TACGGTGCTCCCTGTCATAAATTTGACGTGAAGCAAATTGGGGCCCAACTCCTGCCTCCG 180
Db    8460 TACGGTGTTTTTTGTTATAAATTTGACGTGAAGTAAATTGGGGTTTAATTTTTGTTTTCG 8519

Qy     181 CTCTACTCGCTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCGTCCTCATCTTA 240
Db    8520 TTTTATTCGTTGGTGTTTATTTTTGGTTTTGTGGGTAATATGTTGGTCGTTTTTATTTTA 8579

Qy     241 ATAAACTGCAAAAAGCTGAAGTGCTTGACTGACATTTACCTGCTCAACCTGGCCATCTCT 300
Db    8580 ATAAATTGTAAAAAGTTGAAGTGTTTGATTGATATTTATTTGTTTAATTTGGTTATTTTT 8639

Qy     301 GATCTGCTTTTTCTTATTACTCTCCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTC 360
Db    8640 GATTTGTTTTTTTTTATTATTTTTTTATTGTGGGTTTATTTTGTTGTAAATGAGTGGGTT 8699

Qy     361 TTTGGGAATGCAATGTGCAAATTATTCACAGGGCTGTATCACATCGGTTATTTTGGCGGA 420
Db    8700 TTTGGGAATGTAATGTGTAAATTATTTATAGGGTTGTATTATATCGGTTATTTTGGCGGA 8759

Qy     421 ATCTTCTTCATCATCCTCCTGACAATCGATAGATACCTGGCTATTGTCCATGCTGTGTTT 480
Db    8760 ATTTTTTTTATTATTTTTTTGATAATCGATAGATATTTGGTTATTGTTTATGTTGTGTTT 8819

Qy     481 GCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTTGGTG 540
Db    8820 GTTTTAAAAGTTAGGACGGTTATTTTTGGGGTGGTGATAAGTGTGATTATTTGGTTGGTG 8879

Qy     541 GCTGTGTTTGCTTCTGTCCCAGGAATCATCTTTACTAAATGCCAGAAAGAAGATTCTGTT 600
Db    8880 GTTGTGTTTGTTTTTGTTTTAGGAATTATTTTTATTAAATGTTAGAAAGAAGATTTTGTT 8939

Qy     601 TATGTCTGTGGCCCTTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAAC 660
Db    8940 TATGTTTGTGGTTTTTATTTTTTACGAGGATGGAATAATTTTTATATAATAATGAGGAAT 8999
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Qy     661 ATTTTGGGGCTGGTCCTGCCGCTGCTCATCATGGTCATCTGCTACTCGGGAATCCTGAAA 720
           ||||||||| ||||  || || || | || ||||| || || || ||||||||  |||||
Db    9000 ATTTTGGGGTTGGTTTTGTCGTTGTTTATTATGGTTATTTGTTATTCGGGAATTTTGAAA 9059

Qy     721 ACCCTGCTTCGGTGTCGAAACGAGAAGAAGAGGCATAGGGCAGTGAGAGTCATCTTCACC 780
           |   || ||||||||||||||||||||||||||| |||||| |||||||| || || |
Db    9060 ATTTTGTTTCGGTGTCGAAACGAGAAGAAGAGGTATAGGGTAGTGAGAGTTATTTTTATT 9119

Qy     781 ATCATGATTGTTTACTTTCTCTTCTGGACTCCCTATAACATTGTCATTCTCCTGAACACC 840
           || |||||||||| ||| | || |||| |   ||||| ||||| ||| |  |||| |
Db    9120 ATTATGATTGTTTATTTTTTTTTTTGGATTTTTTATAATATTGTTATTTTTTTGAATATT 9179

Qy     841 TTCCAGGAATTCTTCGGCCTGAGTAACTGTGAAAGCACCAGTCAACTGGACCAAGCCACG 900
           ||  ||||||| ||||| ||||||| |||||||| |  ||| || |||| ||| |||
Db    9180 TTTTAGGAATTTTTCGGTTTGAGTAATTGTGAAAGTATTAGTTAATTGGATTAAGTTACG 9239

Qy     901 CAGGTGACAGAGACTCTTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTC 960
            |||||| ||||| | ||||||||| | | || || || ||| || || |||| |||
Db    9240 TAGGTGATAGAGATTTTTGGGATGATTTATTGTTGTATTAATTTTATTATTTATGTTTTC 9299

Qy     961 GTTGGGGAGAAGTTCAGAAGCCTTTTT 987
           ||||||||||||||| |||||   ||||
Db    9300 GTTGGGGAGAAGTTTAGAAGGTATTTT 9326
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